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State of New Jersey Office of the Attorney General Division of Elections

County Server Capacity Planning for the Statewide Voter Registration System (SVRS)

NEW JERSEY

Deliverable SVRS 017

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Revision History

Date	Brief Description	Changed By:
06/16/2005	Initial Draft	Wm. Gary Bush
06/22/2005	Details Added	Chad Duling
06/26/2005	PCC Updates	Ray Satyaneni
06/28/2005	Final ATS Updates and Review	Chad Duling
06/29/2005	Final Formatting – Version 1	Wm. Gary Bush

DETAILS

County server capacity planning was done based on the current registered active/inactive voter count in each county. The existing counties are divided into two groups with a base line of 400,000 active voters. Counties with greater than 400,000 active voters are grouped into "Group 1" and all other counties are grouped into "Group 2"

The below table shows the current voters on the Maser file for each county.

COUNTY	ACTIVE	INACTIVE	TOTAL
ATLANTIC	153,016	16,592	169,608
BERGEN	522,490	34,776	557,266
BURLINGTON	264,532	9,844	274,376
CAMDEN	314,033	142,952	456,985
CAPE MAY	68,828	5,390	74,218
CUMBERLAND	82,343	6,165	88,508
ESSEX	428,942	3,678	432,620
GLOUCESTER	173,793	11,025	184,818
HUDSON	303,325	47,857	351,182
HUNTERDON	81,155	5,331	86,486
MERCER	208,067	16,309	224,376
MIDDLESEX	427,032	41,071	468,103
MONMOUTH	407,766	54,641	462,407
MORRIS	311,550	32,834	344,384
OCEAN	353,098	16,189	369,287
PASSAIC	254,569	28,964	283,533
SALEM	42,242	2,385	44,627
SOMERSET	172,753	1,982	174,735
SUSSEX	89,679	6,378	96,057
UNION	283,270	33,533	316,803
WARREN	63,466	5,223	68,689
TOTAL	**5,005,959**	**523,119**	**5,529,078**

CURRENT VOTERS ON MASTER FILE

The below are the counties having more than 400,000 Active voters (Group 1 Counties).

Counties having more than 400,000 Active/Inactive voters (Group 1 Counties)		
BERGEN	522,490	34,776	557,266
CAMDEN	314,033	142,952	456,985
ESSEX	428,942	3,678	432,620
MIDDLESEX	427,032	41,071	468,103
MONMOUTH	407,766	54,641	462,407

The below are the counties less than or equal 400,000 Active voters (Group 2 Counties).

Counties having less than 400,000 Active/Inactive voters (Group 2 Counties)		
ATLANTIC	153,016	16,592	169,608
BURLINGTON	264,532	9,844	274,376
CAPE MAY	68,828	5,390	74,218
CUMBERLAND	82,343	6,165	88,508
GLOUCESTER	173,793	11,025	184,818
HUDSON	303,325	47,857	351,182
HUNTERDON	81,155	5,331	86,486
MERCER	208,067	16,309	224,376
MORRIS	311,550	32,834	344,384
OCEAN	353,098	16,189	369,287
PASSAIC	254,569	28,964	283,533
SALEM	42,242	2,385	44,627
SOMERSET	172,753	1,982	174,735
SUSSEX	89,679	6,378	96,057
UNION	283,270	33,533	316,803
WARREN	63,466	5,223	68,689

Based on these tables, the following Hardware, Software, Data Storage, and Network Bandwidth solutions were established.

Hardware:

Group	Web Server / App Server/ Report Queue manager Server	Database Server / County Data Synchronization client
Group 1	Dell PowerEdge 2800	Dell PowerEdge 6800
Group 2	Dell PowerEdge 2800	Dell PowerEdge 2800

Software:

Web Server Software: IIS

Application Server Software:

- JBoss
- ElectioNet
- ScriptX Printing Software
- Jasper Reports

Database Server Software:

- Oracle

Report Queue Manager Server Software:

- Jasper Reports
- ElectioNet Report Queue Manager Server

USPS ZIP+4 and Tiger ZIP subscription:

Data Storage:

County server storage capacity planning was done by taking into account the total voters, one signature per voter, and voter registration card per voter and considering an annual 10% growth. The final data size varied from county to county but it was found that the Dell PowerEdge 2800 with (5) 73 GB hard drives would have been sufficient for both Group1 and Group 2 Counties.
Five counties were upgraded to the 6800 because of the registered voter count and bandwidth usage estimates.

Network Bandwidth:

Site Name	Phone Number	Speed	Speed
Atlantic	609- 641-7867	T1	1544K
Bergen	201-336-7020	T1	1544K
Burlington	609-265-5122	T1	1544K
Camden	856-225-7219	T1	1544K
Cape May	609-465-1013	Fractional T1	512K
Cumberland	856-451-8000	Fractional T1	512K
Essex	973-621-4921	T1	1544K
Farmington Hills, MI *	248-488-2088	T1	1544K
Gloucester	856-853-3241	T1	1544K
Hudson	201-795-6112	T1	1544K
Hunterdon	908-788-1214	Fractional T1	512K
Mercer	609-989-6494	T1	1544K
Middlesex	732-745-3827	T1	1544K
Middletown, CT *	860-613-4500	Burstable T3	9M
Monmouth	732-431-7324	T1	1544K
Morris	973-285-6066	T1	1544K
Ocean	732-929-2018	T1	1544K
Passaic	973-225-3632	T1	1544K
Salem	856-935-7510	Fractional T1	512K
Somerset	908-231-7013	T1	1544K
Sussex	973-579-0900	Fractional T1	512K
Union	908-527-4998	T1	1544K
Warren	908-475-6214	Fractional T1	512K